In the Claims

1   1. (currently amended) A method for equalizing a signal transmitted via a

2   channel of a communications system, comprising:

3   storing a training signal received via the channel in a circular buffer as

4   a circulating training signal, wherein the training signal includes a sequence

5   of symbols, and the number of symbols in the sequence is less than five;

6   minimizing a mean square error of the training signal while estimating

7   the training signal;

8   determining if the mean square error is greater than a predetermined

9   threshold, and minimizing the mean square error of the circulating training

10 signal and the estimate of the training signal until the mean square error is

11 less than the predetermined threshold; and

12   equalizing an input signal received directly via the channel to make

13 decisions on symbols of the signal transmitted via the channel if the mean

14 square error is less than the predetermined threshold.

    2. (canceled)

1   3. (original) The method of claim 1 wherein the predetermined threshold is a

2   target mean square error.

1   4. (currently amended) A system for equalizing a signal transmitted via a

2   channel of a communications system, comprising:

3   a main buffer configured to store an input signal received via the

4   channel;

5   a circular buffer configured to store a training signal of the input

6   signal as a circulating training signal, wherein the training signal includes a

7   sequence of symbols, and the number of symbols in the sequence is less than

8   five;

9   an equalization and decision device;

10   a desired response generator coupled to the equalization and decision

11 device;

12   a circulation trigger coupled to the equalization and decision device;

13 and

14   a switch controlled by the circulation trigger, the switch feeding the

15 training signal to the equalization and decision device during training stages,

16 and the switch feeding the input signal to the equalization and decision

17 device during an equalization stage.

1   5. (original) The system of claim 4 further comprising:

2   means for minimizing a mean square error of the training signal while

3   estimating the training signal;

4   means for determining if the mean square error is greater than a

5   predetermined threshold, and minimizing the mean square error of the

6   circulating training signal and the estimate of the training signal until the

7   mean square error is less than the predetermined threshold; and

8   means for equalizing the input signal received directly via the channel

9   to make decisions on symbols of the signal transmitted via the channel if the

10   mean square error is less than the predetermined threshold.